

## WHAT IS CLAIMED IS:

1 1. A radio frequency (RF) transceiver comprising:

2 a radio frequency (RF) modem section comprising:

3 receive path circuitry capable of receiving and  
4 down-converting an incoming RF signal to thereby produce an  
5 incoming baseband signal; and

6 transmit path circuitry capable of receiving and  
7 up-converting an outgoing baseband signal to thereby  
8 produce an outgoing RF signal;

9 a baseband section comprising baseband circuitry  
10 capable of receiving and processing said incoming baseband signal  
11 and capable of generating said outgoing baseband signal; and

12 a power-saving apparatus capable of determining that  
13 said baseband section is idle and, in response to said  
14 determination, reducing a power supply voltage providing power  
15 to said baseband section.

1 2. The RF transceiver as set forth in Claim 1 wherein said  
2 power-saving apparatus is further capable of reducing a power  
3 supply voltage providing power to said receive path circuitry.

1           3.    The RF transceiver as set forth in Claim 2 wherein said  
2 power-saving apparatus comprises a timer and a switch operable  
3 to switch said power supply voltage on and off to said receive  
4 path circuitry.

1           4.    The RF transceiver as set forth in Claim 3 wherein said  
2 power-saving apparatus is further capable of monitoring said  
3 incoming baseband signal during a time period when said power  
4 supply voltage is switched on to said receive path circuitry and  
5 determining if said incoming baseband signal is directed to said  
6 RF transceiver.

1           5.    The RF transceiver as set forth in Claim 4 wherein said  
2 power-saving apparatus, in response to a determination that said  
3 incoming baseband signal is directed to said RF transceiver,  
4 increases said power supply voltage providing power to said  
5 baseband section.

1           6.    The RF transceiver as set forth in Claim 4 wherein said  
2 power-saving apparatus, in response to a determination that said  
3 incoming baseband signal is directed to said RF transceiver,  
4 increases said power supply voltage providing power to said  
5 receive path circuitry.

1           7.    The RF transceiver as set forth in Claim 6 wherein said  
2 power-saving apparatus is further capable of reducing a power  
3 supply voltage providing power to said transmit path circuitry.

1           8.    The RF transceiver as set forth in Claim 7 wherein said  
2 power-saving apparatus, in response to a determination that said  
3 incoming baseband signal is directed to said RF transceiver,  
4 increases said power supply voltage providing power to said  
5 transmit path circuitry.

1           9.    The RF transceiver as set forth in Claim 1 wherein said  
2 power-saving apparatus is further capable of reducing a power  
3 supply voltage providing power to said transmit path circuitry.

1           10.   The RF transceiver as set forth in Claim 9 wherein said  
2 power-saving apparatus is further capable of monitoring said  
3 incoming baseband signal and determining if said incoming  
4 baseband signal is directed to said RF transceiver.

1           11. The RF transceiver as set forth in Claim 10 wherein  
2           said power-saving apparatus, in response to a determination that  
3           said incoming baseband signal is directed to said RF transceiver,  
4           increases said power supply voltage providing power to said  
5           transmit path circuitry.

1           12. The RF transceiver as set forth in Claim 11 wherein  
2           said power-saving apparatus, in response to said determination  
3           that said incoming baseband signal is directed to said RF  
4           transceiver, increases said power supply voltage providing power  
5           to said baseband section.

13. A method of reducing power consumption in a radio frequency transceiver comprising: 1) receive path circuitry for receiving and down-converting an incoming RF signal to produce an incoming baseband signal; 2) transmit path circuitry for receiving and up-converting an outgoing baseband signal to produce an outgoing RF signal; and 3) a baseband section comprising baseband circuitry for receiving and processing the incoming baseband signal and generating the outgoing baseband signal, the method comprising the steps of:

determining that the baseband section is idle; and

in response to the determination that the baseband section is idle, reducing a power supply voltage providing power to the baseband section.

14. The method as set forth in Claim 13 further comprising the step of reducing a power supply voltage providing power to the receive path circuitry.

15. The method as set forth in Claim 14 further comprising the step of switching the power supply voltage on and off to the receive path circuitry.

1           16. The method as set forth in Claim 15 further comprising  
2 the steps of:

3           monitoring the incoming baseband signal during a time  
4 period when the power supply voltage is switched on to the  
5 receive path circuitry; and

6           determining if the incoming baseband signal is directed  
7 to the RF transceiver.

17. The method as set forth in Claim 16 further comprising  
the step, in response to a determination that the incoming  
baseband signal is directed to the RF transceiver, of increasing  
the power supply voltage providing power to the baseband section.

18. The method as set forth in Claim 16 further comprising  
the step, in response to a determination that the incoming  
baseband signal is directed to the RF transceiver, of increasing  
the power supply voltage providing power to the receive path  
circuitry.

19. The method as set forth in Claim 18 further comprising  
the step of reducing a power supply voltage providing power to  
the transmit path circuitry.

1           20. The method as set forth in Claim 19 further comprising  
2 the steps, in response to a determination that the incoming  
3 baseband signal is directed to the RF transceiver, of increasing  
4 the power supply voltage providing power to the transmit path  
5 circuitry.

1           21. The method as set forth in Claim 13 further comprising  
2 the step of reducing a power supply voltage providing power to  
3 the transmit path circuitry.

1           22. The method as set forth in Claim 21 further comprising  
2 the steps of monitoring the incoming baseband signal and  
3 determining if the incoming baseband signal is directed to the  
4 RF transceiver.

1           23. The method as set forth in Claim 22 further comprising  
2 the step, in response to a determination that the incoming  
3 baseband signal is directed to the RF transceiver, of increasing  
4 the power supply voltage providing power to the transmit path  
5 circuitry.

1           24. The method as set forth in Claim 23 further comprising  
2           the step, in response to the determination that the incoming  
3           baseband signal is directed to the RF transceiver, of increasing  
4           the power supply voltage providing power to the baseband section.

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